

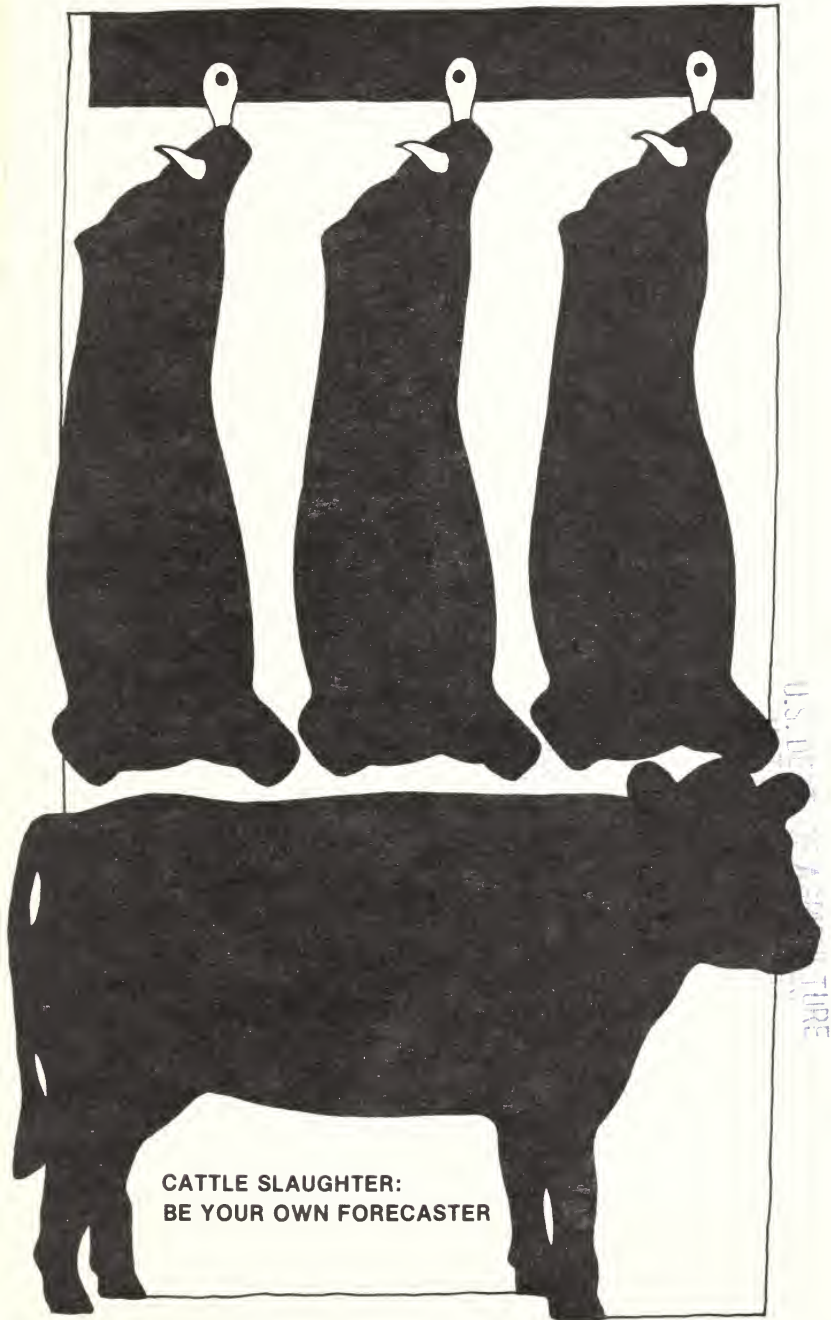
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agricultural situation

THE CROP REPORTERS MAGAZINE
ECONOMICS, STATISTICS, AND COOPERATIVES SERVICE
U.S. DEPARTMENT OF AGRICULTURE

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**CATTLE SLAUGHTER:
BE YOUR OWN FORECASTER**

CATTLE SLAUGHTER: BE YOUR OWN FORECASTER

After peaking during the first half of 1975, the number of cattle in the United States has continued to drop off steadily. How much longer and how far the cattle herd will shrink remains to be seen.

One thing's for sure. . .once herd rebuilding gets underway, beef supplies will dwindle as cattlemen send fewer animals to market.

By knowing roughly how many head will be going to slaughter in coming months, cattlemen can time their marketings to get the best possible price for their finished animals.

For those operators who want to stay on top of the market and make their own forecasts of upcoming slaughter supplies, three reports issued by the Crop Reporting Board are required reading:

Cattle. Usually referred to as the "cattle inventory report," it's released each January and July showing the number of cattle and calves on hand across the country as of the first of those months.

Cattle on Feed. This is released each month, detailing the numbers on feed, placements, and marketings in the seven major feeding States. The January, April, July, and October issues carry similar data for 23 States.

Livestock Slaughter. Another monthly release, this indicates the number of animals slaughtered and total red meat production

The three reports provide most of the information you'll need to forecast beef supplies for the next few months. By applying that information to the charts on pp. 4-5 and following a few simple steps, we'll show you how it's done, using July-September as an example.

Most of the Nation's beef supply comes from cattle produced in feedlots. Therefore, the potential supply of *fed* animals is an important fac-

tor in determining cattle prices.

Heavyweight cattle in feedlots as shown in the *July Cattle on Feed* report provide the bulk of the fed marketings during July-September. First, we'll determine total fed steer and heifer slaughter for that quarter.

Step One—Estimate Fed Cattle Slaughter for the 23 States: Total the heavyweight steers and heifers on feed as follows:

	1,000 head
Steers 700-899 lbs. (2,759 ÷ 2)	1,380
Steers 900-1,099 lbs.	2,237
Steers 1,100 + lbs.	372
TOTAL STEERS	3,989
Heifers 700-899 lbs.	1,831
Heifers 900 + lbs.	567
TOTAL HEIFERS	2,398
TOTAL HEAVYWEIGHT STEERS & HEIFERS	6,387

Note that only half the steers in the 700-899 lb. weight group are included. That's because roughly half—those at the low end of the weight category—will probably not be heavy enough for slaughter within 3 months.

Next go to the July-September chart on p. 5 which shows the historical relationships between the July 1 cattle on feed in these weight groups in the 23 States and the number of fed cattle marketed during July-September.

Get your reading from this chart by pinpointing your total—6,387,000—on the bottom scale and drawing a vertical line to the diagonal, or as in this case, slightly above it since several recent years are also above the line. You should get about 6.6 million.

The diagonal line shows the historical trend, and the marked spots indicate how far actual marketings have deviated from it since 1970. In 1973, for example, marketings slipped well below trend, when declining prices and slower gains due to adverse weather conditions influenced feeders to delay marketings past normal weights.

Step Two—Estimate Fed Slaughter for the Entire United States: Divide the 6.6 million you got in Step One by .96 (because the 23 States produce 95-97 percent of total fed marketings). Your answer is almost 6.9 million.

Step Three—Estimate U.S. Steer and Heifer Slaughter: Your estimate of fed cattle marketings can be expanded into a total for all steers and heifers by referring to the latest *Cattle* report and the table on p. 8.

The table indicates that for the previous two quarters, the fed share of total slaughter has been 91.2 to 91.8 percent. Let's use 92 percent. Divide the 6.9 million fed steers and heifers estimated in Step Two by .92. This gives you 7.5 million head.

Step Four—Estimate U.S. Cow and Bull Slaughter: Again refer to the table on p. 8 to determine the range of July-September cow and bull slaughter. Over the past six quarters, it's varied from 2.4 to 3.0 million. Also note that during the past 2 years, the July-September quarter has topped the April-June period by 200,000 to 300,000 head.

Your estimate will depend in part on what the *Cattle* reports indicate about the cattle cycle. The drop in the number of beef cows and beef replacement heifers in the July 1978 inventory report indicates a continued decline in the cattle cycle. The cutback in the cow herd is still underway and heifers are not yet being held for herd expansion. Let's assume you estimate total cow and bull slaughter at 2.6 million.

Step Five—Add 'Em Up: Adding

the total steer and heifer slaughter (7.5 million) with total cow and bull slaughter (2.6 million) yields a total of 10.1 million head for the July-September period. This estimate is 5 percent below the same quarter in 1977, whereas the estimate of fed steer and heifer slaughter is up about 6 percent.

What about slaughter supplies for the other three quarters? We've used July-September as an example, but you can estimate total cattle slaughter for any coming quarter by using the latest "quarterly" *Cattle on Feed* report (one with data from 23 States) and the appropriate heavyweight chart. For example, when the January 1979 *Cattle on Feed* report is released, you'll be able to forecast first quarter 1979 supplies by plotting data from that report on the January-March chart and following the same steps as before.

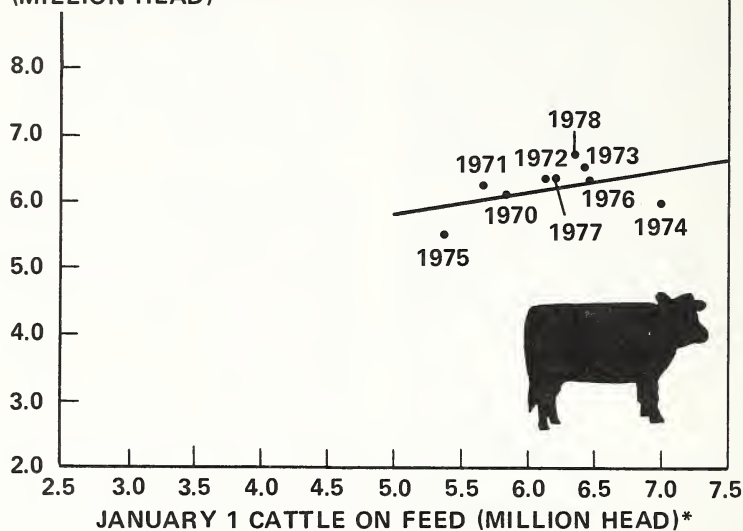
How about longer range forecasts? Up 'til now, we've only been concerned with projecting supplies for the coming 3 months, but you can forecast slaughter 4 to 6 months ahead. Again, you can do this for any quarter, but this time use the lightweight charts on pp. 6-7.

For example, you can forecast slaughter supplies for October-December from the July *Cattle on Feed* report. Use the lightweight steers and heifers from that release, the October-December lightweight chart, the same table on p. 8, and then proceed through Steps One to Five.

Is it worth the bother of making elaborate market forecasts? Like any other businessman, a cattle operator needs to know what's "down the road." We've provided the charts, but you'll need the most recent *Cattle, Livestock Slaughter*, and *Cattle on Feed* reports to use them and stay current.

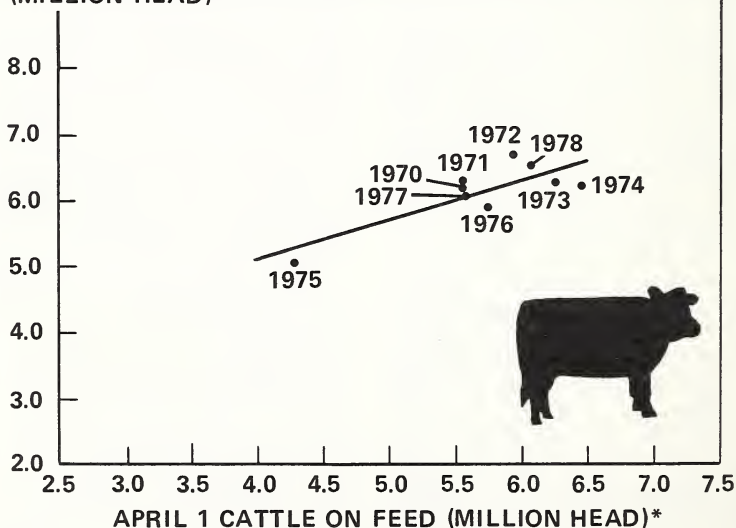
If you'd like copies of these reports as they're released, write the Crop Reporting Board, Rm. 0005 South, USDA, Washington, D.C. 20250.

JAN. - MAR. FED CATTLE MARKETINGS (MILLION HEAD)



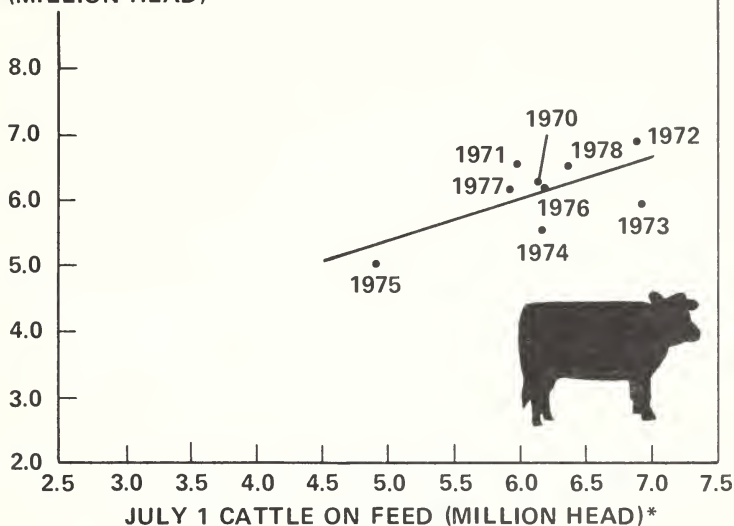
*1/2 of steers 700-899 lbs. plus all those over 900 lbs. and all heifers over 700 lbs.

APR. - JUN. FED CATTLE MARKETINGS (MILLION HEAD)



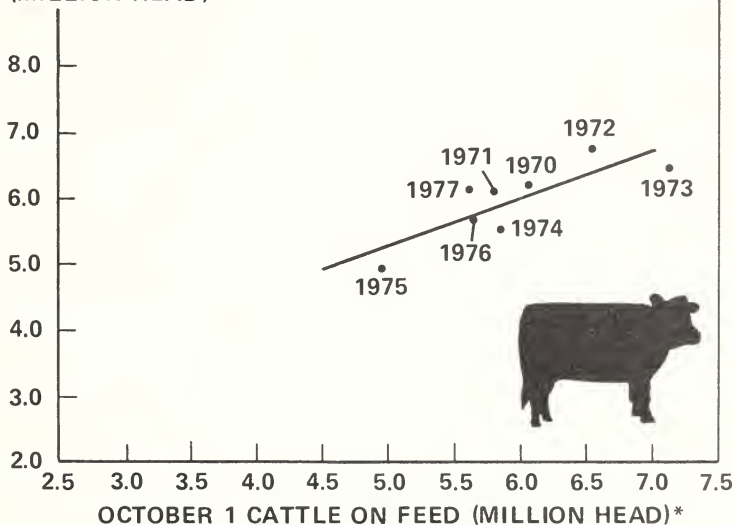
*1/2 of steers 700-899 lbs. plus all those over 900 lbs. and all heifers over 700 lbs.

**JUL. - SEPT. FED CATTLE MARKETINGS
(MILLION HEAD)**



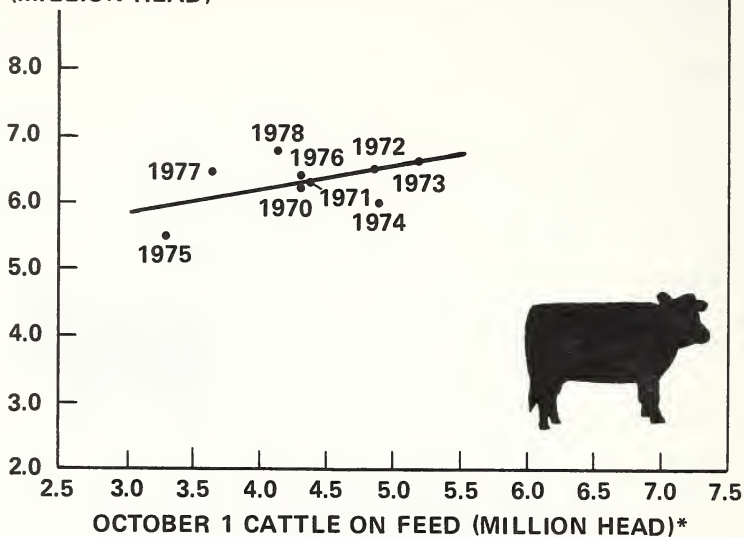
*1/2 of steers 700-899 lbs. plus all those over 900 lbs. and all heifers over 700 lbs.

**OCT. - DEC. FED CATTLE MARKETINGS
(MILLION HEAD)**



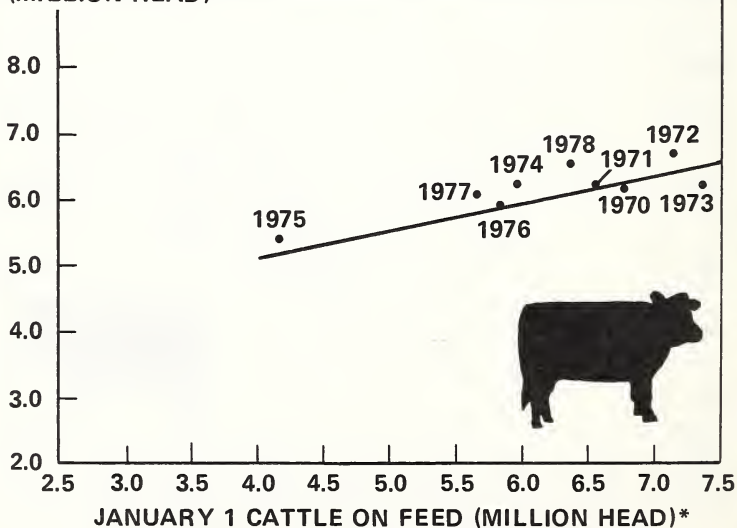
*1/2 of steers 700-899 lbs. plus all those over 900 lbs. and all heifers over 700 lbs.

JAN. - MAR. FED CATTLE MARKETINGS (MILLION HEAD)



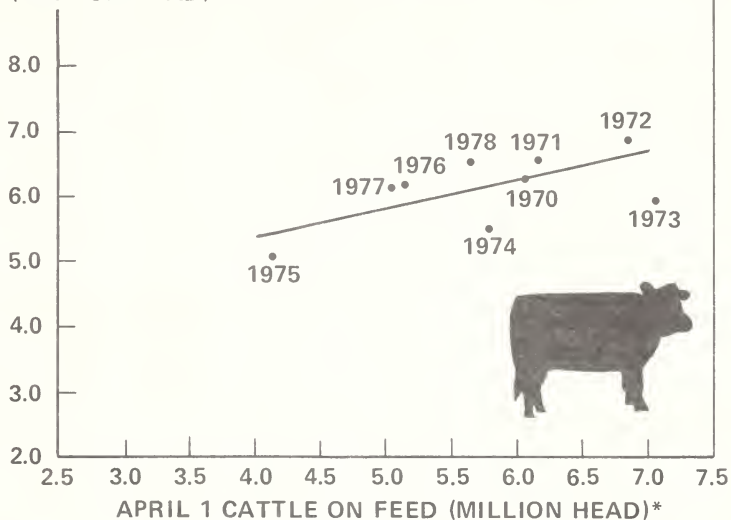
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APR. - JUN. FED CATTLE MARKETINGS (MILLION HEAD)



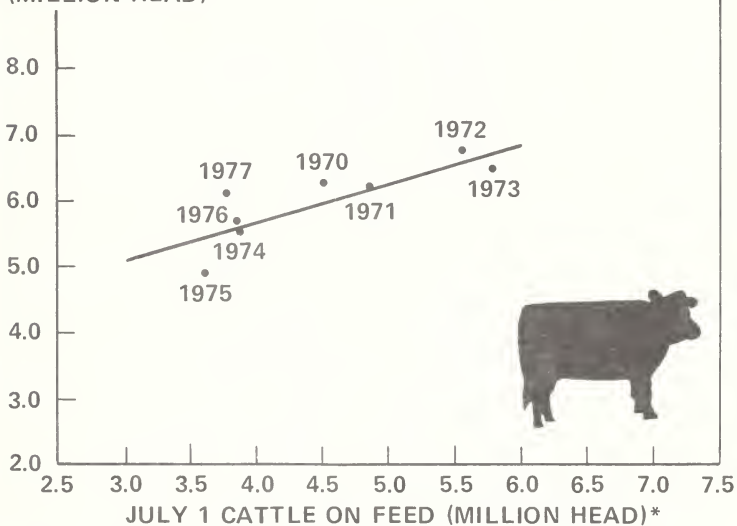
*1/2 of steers 700-899 lbs. plus all steers and heifers under 700 lbs.

JUL. - SEPT. FED CATTLE MARKETINGS (MILLION HEAD)



*1/2 of steers 700-899 lbs. plus all steers and heifers under 700 lbs.

OCT. - DEC. FED CATTLE MARKETINGS (MILLION HEAD)



*1/2 of steers 700-899 lbs. plus all steers and heifers under 700 lbs.

U.S. SLAUGHTER TRENDS

Year and quarter	Steer and heifer slaughter			Cow and bull slaughter	Total commercial slaughter
	Fed	Total	Fed share of total		
	<i>1,000 head</i>		<i>Percent</i>	<i>1,000 head</i>	
1973 Jan-Mar	6,845	6,916	99.0	1,746	8,662
Apr-June	6,534	6,557	99.6	1,598	8,155
Jul-Sep	6,196	6,280	98.7	1,717	7,997
Oct-Dec	6,734	7,010	96.1	1,863	8,873
Year	26,309	26,763	98.3	6,924	33,687
1974 Jan-Mar	6,238	6,660	93.7	1,854	8,514
Apr-Jun	6,521	7,247	90.0	1,571	8,818
Jul-Sep	5,758	7,202	80.0	2,161	9,363
Oct-Dec	5,761	7,364	78.2	2,753	10,117
Year	24,278	28,473	85.3	8,339	36,812
1975 Jan-Mar	5,727	7,300	78.5	2,432	9,732
Apr-Jun	5,225	6,857	76.2	2,694	9,551
Jul-Sep	5,220	7,103	73.5	3,437	10,540
Oct-Dec	5,148	6,996	73.6	4,092	11,088
Year	21,320	28,256	75.5	12,655	40,911
1976 Jan-Mar	6,599	7,925	83.3	2,988	10,913
Apr-Jun	6,179	7,579	81.5	2,591	10,170
Jul-Sep	6,448	8,035	80.2	2,874	10,909
Oct-Dec	5,911	7,498	78.8	3,164	10,662
Year	25,137	31,037	81.0	11,617	42,654
1977 Jan-Mar	6,720	7,719	87.1	2,747	10,466
Apr-Jun	6,393	7,806	81.9	2,387	10,193
Jul-Sep	6,405	7,987	80.2	2,642	10,629
Oct-Dec	6,337	7,577	83.6	2,991	10,568
Year	25,855	31,089	83.2	10,767	41,856
1978 Jan-Mar	7,044	7,672	91.8	2,532	10,204
Apr-Jun	6,855	7,514	91.2	2,358	9,872
Jul-Sep	6,767	7,538	89.8	2,201	9,739
Oct-Dec					
Year					

FEWER CATTLE, MORE ON FEED

The questions continue to surface: How can the number of cattle on feed continue to rise when the total inventory keeps declining? How long can such a trend last?

A look at the situation during the last few years provides an answer to the first question, but the second is a lot trickier.

During the early 1970's, cattle producers responded to favorable prices by sharply increasing their herds. By early 1975, the number of cattle and calves on farms reached a record 132 million head.

But by the mid-1970's, producers were caught with too many head and low cattle prices. Stung by huge financial losses, cattlemen rapidly began selling off their herds. By the beginning of this year, the selloff

had reduced the total inventory to 116.3 million head, with a further decline expected for 1979, as indicated in the cattle on farms chart, p. 10.

During this buildup of the Nation's cattle herd and its subsequent decline, the cattle feeding industry underwent some abrupt changes. In the late 1960's and early 1970's, when grain was plentiful and relatively low-priced, the number of cattle going into feedlots climbed sharply. In 1972, placements reached a peak of over 27 million head.

In 1973, however, corn prices soared and remained high for about 4 years. Reacting to steep corn prices, cattlemen began placing fewer animals on feed, even while the total cattle inventory continued to rise.

By January 1975, when the cattle count peaked at 132 million head, only 10.2 million—slightly less than 8 percent of the total inventory—were on feed. This compares with early 1972—see inventory table, p. 12—when the herd was a much smaller 117.9 million head, but nearly 14 million, or close to 12 percent, were in feedlots.

With corn prices dropping well below the 1973-75 levels during the past 1½ to 2 years, the number of animals entering feedlots has been growing steadily. At the start of this year, there were 13.5 million cattle on feed. This accounted for 11.6 percent of the total herd—roughly the same share as in January 1972.

The changing slaughter mix further explains the situation. Data in the bottom table, p. 12, show the upward trend in commercial cattle slaughter from 1970 to 1976. They also reveal how nonfed steer and heifer slaughter declined through 1973, then turned sharply higher during 1974 and 1975.

This increase coincided with the steep decline in the number of cattle on feed. However, since 1975, nonfed steer and heifer slaughter has

fallen off, while slaughter of fed animals has accelerated.

In 1972 and 1973, fed steers and heifers accounted for about 77 percent of all commercial slaughter, while nonfed steers and heifers made up only 3 to 4 percent. With the decline in cattle feeding, fed steers and heifers provided only 52 percent of 1975's slaughter mix, while the share for nonfeds climbed to 17 percent, as indicated in the bottom chart, p. 10.

But now the mix has changed again, with a sharply bigger share of slaughter coming from feedlots. Last year, fed cattle accounted for about 62 percent of total slaughter and may increase this year to near 70 percent.

The top chart on p. 11 reveals that calf slaughter also trended downward before turning up in 1974. It continued at a high level through 1977 but has slipped this year.

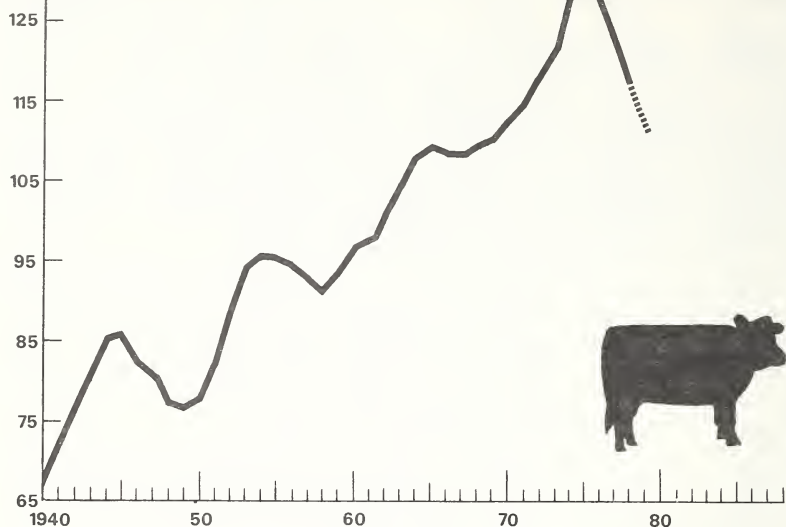
Feeder cattle supplies have been ample to support a large volume of placements last year and this year. However, a July 1 estimate of the number outside feedlots showed a small drop from 1976 to 1977, but a 10-percent plunge from 1977 to 1978—bottom chart, p. 11. This indicates that feedlot operators soon may have trouble finding a big enough supply of feeder animals to continue increasing the number placed on feed.

However, changes in the slaughter mix will augment the feeder cattle supply. Reduced slaughter of calves and nonfed steers and heifers lowers the pressure on feeder cattle supplies and frees up some cattle to go into feedlots.

So, while the total supply of cattle is much lower, more of them are going into feedlots and fewer are headed to slaughter as calves and other nonfed animals. Year-to-year increases in placements of cattle on feed are likely to continue into 1979, but any increases later in the year and 1980 will probably be small.

CATTLE ON FARMS, January 1

Mil. Hd.



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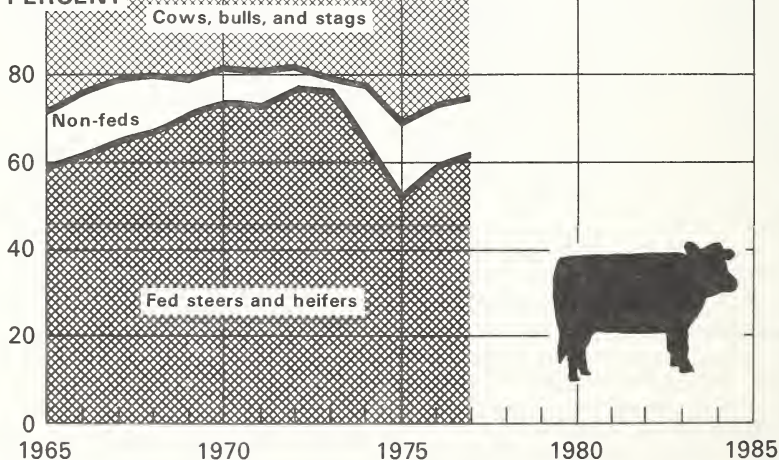
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COMMERCIAL CATTLE SLAUGHTER BY CLASS^o

PERCENT



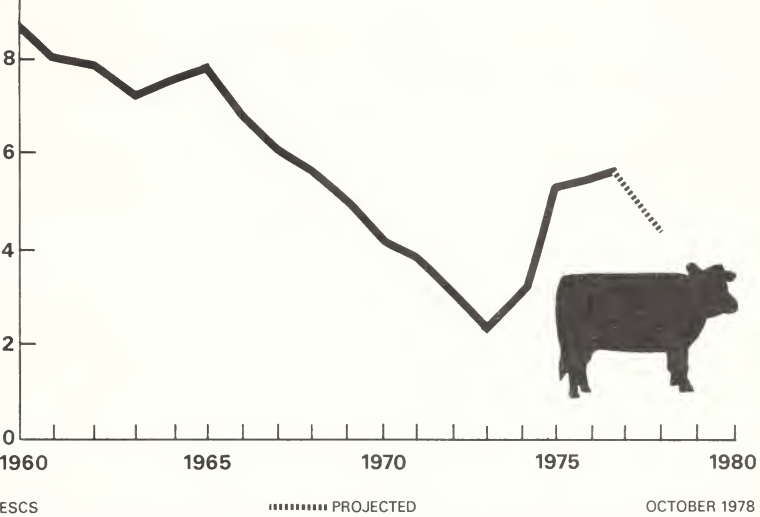
^o CLASSES ESTIMATED.

USDA

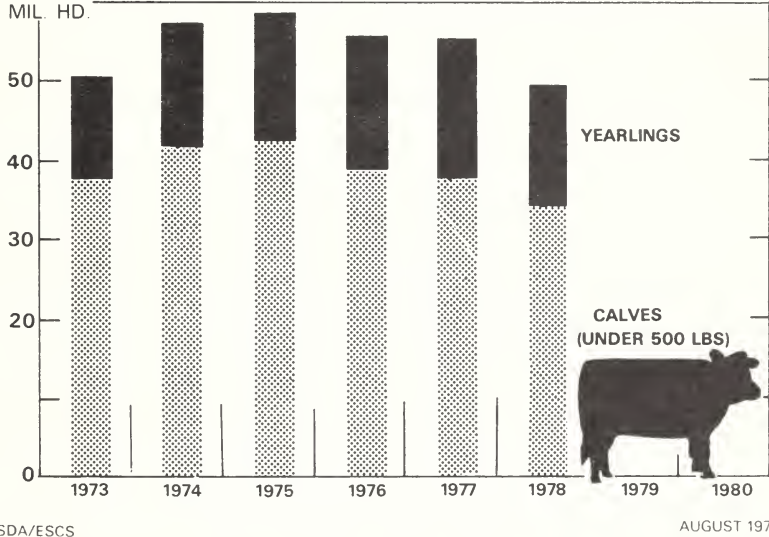
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CALF SLAUGHTER MIL. HD.



FEEDER CATTLE SUPPLY, JULY 1





U.S. CATTLE INVENTORY AND CATTLE ON FEED COMPARISONS

JANUARY 1

Year	All cattle	Cattle on feed ¹	Percent of inventory
	<i>1,000 head</i>	<i>1,000 head</i>	<i>Percent</i>
1965	109,000	9,979	9.2
1966	108,862	10,582	9.7
1967	108,783	11,268	10.4
1968	109,371	11,417	10.4
1969	110,015	12,534	11.4
1970	112,369	13,190	11.7
1971	114,578	12,770	11.1
1972	117,862	13,912	11.8
1973	121,539	14,432	11.9
1974	127,788	13,643	10.7
1975	132,028	10,170	7.7
1976	127,980	12,941	10.1
1977	122,810	12,580	10.2
1978	116,265	13,450	11.6

¹39 States, 1965-71, 50 States beginning 1972.

COMMERCIAL SLAUGHTER BY CLASS, 1970-78

CATTLE

Year	Steers and heifers			Cows and bulls	Total	CALVES	TOTAL CATTLE AND CALVES
	Fed	Nonfed	Total				
	<i>1,000 head</i>						
1970	25,710	2,621	28,331	6,694	35,025	4,072	39,097
1971	26,060	2,517	28,577	7,008	35,585	3,689	39,274
1972	27,670	1,472	29,142	6,637	35,779	3,053	38,832
1973	25,890	873	26,763	6,924	33,687	2,249	35,936
1974	23,880	4,598	28,478	8,334	36,812	2,987	39,799
1975	21,210	7,047	28,257	12,654	40,911	5,209	46,120
1976	25,040	5,997	31,037	11,617	42,654	5,350	48,004
1977	25,890	5,199	31,089	10,767	41,856	5,517	47,373
1978 ¹	27,490	2,580	30,070	9,330	39,400	4,200	43,600

¹Forecast.

Briefings

RECENT REPORTS BY USDA OF ECONOMIC, MARKETING, AND RESEARCH DEVELOPMENTS AFFECTING FARMERS.

EAST EUROPE BUYS AMERICAN. . . Look for East Europe to continue buying large volumes of U.S. farm goods, since the area's agricultural output has fallen short of projected goals. According to USDA economists, harvests of grain, oilseeds, and sugarbeets turned lower than projected in current 5-year plans (1976-80) which call for crop production to outpace livestock output, significantly larger machinery investments, and modernization of food and feed industries. All seven countries—Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia—will probably maintain their current farm import levels despite recent balance of payment deficits.

BIG PHONE LOAN. . . USDA recently made its largest single telephone loan in history. Recipient of the \$60.5 million loan was the Puerto Rico Communications Authority, San Juan. Telephone service will be extended for the first time to 43,000 rural residents and upgraded for almost 22,000 others. Funds were provided by USDA's Rural Electrification Administration.

SCRAPIE INDEMNITY RAISED. . . Federal indemnity payments for sheep destroyed to stop the spread of scrapie, a disease of the central nervous system, have been raised to a maximum of \$300 a head. The sheep industry asked USDA's Animal and Plant Health Inspection Service (APHIS) to increase the rates because the market value of sheep greatly exceeds the old indemnity rates—\$40 for grade animals and \$90 for purebreds. The new payments are set at two-thirds of the appraised value of all sheep and goats—not to exceed \$300. The value will be determined by qualified appraisers.

RECORD RICE RESULTS. . . The rice outlook for 1978/79 points to a record U.S. and world crop and continued strong exports but declining prices, according to USDA economists. In response to strong price levels last spring, U.S. producers expanded 1978 plantings by a third.

Domestic consumption is expected to rise modestly, but exports may face stronger competition in world markets. Nevertheless, early season commercial export commitments are running about 30% above last year's level. This season's record supplies and nearly unchanged demand suggest season average farm prices will decline from \$9.43 per cwt. in 1977/78, to a range of \$6.50 to \$7.50 during 1978/79.

SOVIETS BULLISH ON U.S. BREEDER CATTLE. . . The United States completed a record sale of breeding cattle to the Russians in mid-October when it shipped 450 Santa Gertrudis beef cattle to Moscow. An earlier shipment contained 95 dairy breeding bulls—85 Holstein and 10 Brown Swiss, bringing the total to 545 head. According to USDA's Foreign Agricultural Service, the largest previous sale of breeding cattle to the Soviets was 218 in 1976.

CITRUS PRODUCTION DOWN, VALUE UP. . . Citrus output during the 1977/78 season dropped 7% from a year earlier, but was worth 37% more, according to the Crop Reporting Board. Production totaled 14.2 million tons, versus 15.2 million in 1976/77. Florida continued as the top citrus supplier—79% of U.S. oranges and 73% of the grapefruit—while California produced the most lemons. Roughly three-quarters of the total crop went to processors.

GYPSY MOTH RAMPAGE. . . Gypsy moths can strip an entire forest in a few days, according to USDA's Animal and Plant Health Inspection Service (APHIS). This year, the destructive gypsy moth caterpillar defoliated approximately 1.25 million acres of trees in the Northeast. Heaviest hit was New York where over ½ million acres were stripped. Damage, though extensive in many areas, was less than expected, as scientists earlier predicted that 2 million acres of trees would be stripped of their leaves. Predicting location and amount of defoliation is complicated because outbreaks come in cycles, sometimes increasing or decreasing erratically.

BOOMING LATIN MARKET . . . Preliminary data indicate that Latin America bought a record amount of U.S. farm products in fiscal 1978. During the first 9 months of the year (October 1977 through June 1978) shipments ran a third above a year earlier, and brisk sales during the remaining quarter were expected to push the yearend tally past the 1973/74 record of \$2.5 billion. Pace setters during the initial 9 months were wheat (more than two times as much as the year before), corn, and a record volume of soybeans.

Statistical Barometer

Item	1976	1977	1978—latest available data	
Agricultural Trade:				
Agricultural exports (\$bil.)	23	24		September
Agricultural imports (\$bil.)	11	13		September
Farm Production and Efficiency:				
Farm output, total (1967=100)	117	121	120	October
Livestock (1967=100) ²	105	106	107	October
Meat animals (1967=100)	105	105	107	October
Dairy products (1967=100)	103	105	104	October
Poultry and eggs (1967=100)	110	112	117	October
Crops (1967=100) ³	121	129	128	October
Feed grains (1967=100)	120	124	130	October
Hay and forage (1967=100)	102	108	113	October
Food grains (1967=100)	141	131	123	October
Sugar crops (1967=100)	128	117	119	October
Cotton (1967=100)	142	195	146	October
Tobacco (1967=100)	108	98	102	October
Oil crops (1967=100)	132	171	177	October
Cropland used for crops (1967=100)	109	111	108	October
Crop production per acre (1967=100)	111	116	119	October
Farm Food Market Basket:⁴				
Retail cost (1967=100)	175.4	179.2	204.3	August
Farm value (1967=100)	177.8	178.1	209.8	August
Farmer's share of retail cost (percent)	38	38	39	August
Farm Employment and Wage Rates:⁵				
Total employment (1967=100)	89	85	79	July
Family labor (1967=100)	⁶ 82	78	75	July
Hired labor (1967=100)	⁶ 110	103	87	July
Wage rates (1967=100)	208	225	243	July

¹Preliminary.

²Gross livestock production includes minor livestock products not included in the separate groups shown. It cannot be added to gross production to compute farm output.

³Gross crop production includes some miscellaneous crops not included in the separate groups shown. It cannot be added to gross livestock production to compute farm output.

⁴Average annual quantities per family and single person households bought by wage and clerical workers, 1960-61, based on Bureau of Labor Statistics figures.

⁵Seasonally adjusted.

⁶Revised.



AGRICULTURAL SITUATION

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DIANE DECKER, EDITOR

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